

Application No.: 10/655,915  
Response dated: April 30, 2007  
Reply to Office Action dated: October 31, 2006

**Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

1. (currently amended) A method of assessing whether a human subject is susceptible to type 2 diabetes comprising the steps of:

determining the SorCS1 cDNA sequence of that subject ;

deducing the amino acid sequence encoded by the sequenced cDNA; and

comparing the deduced SorCS1 amino acid sequence with SEQ ID NO:4, wherein a difference in the deduced amino acid sequence relative to SEQ ID NO:4 indicates that the subject is susceptible to developing type 2 diabetes, wherein the difference is a threonine to a isoleucine substitution at amino acid position 52 of the SorCS1 amino acid sequence.

2. (currently amended) A method of assessing whether a human subject is susceptible to type 2 diabetes comprising the steps of:

determining the cDNA sequence of the subject in the SorCS1; and

comparing the determined SorCS1 cDNA sequence with SEQ ID NO:3, wherein a difference in the determined cDNA sequence relative to SEQ ID NO:3 indicates that the subject is susceptible to developing type 2 diabetes, wherein the difference is a cytosine to a thymine substitution at nucleotide position 172 of the SorCS1 cDNA sequence.

3. (currently amended) A method for determining whether a human is a candidate for developing type 2 diabetes, the method comprising the steps of:  
determining the sequence of the protein coding region of the human SorCS1 gene in the genome of the human;  
deducing the amino acid sequence encoded by the region sequenced;  
and  
comparing the deduced amino acid sequence with SEQ ID NO:4,  
wherein a difference in the deduced amino acid sequence observed relative to SEQ ID NO:4 indicates the human as a candidate for developing type 2 diabetes, wherein the difference is a threonine to a isoleucine substitution at amino acid position 52 of the SorCS1 amino acid sequence.

4. (withdrawn) A method for determining whether a human being is a candidate for developing type 2 diabetes, the method comprising the step of:  
determining the mRNA or protein expression level of either SorCS 1 or SorCS 3 in the human being wherein the expression in comparison to normal range level of expression established by type 2 diabetes-free individuals indicates that the human being is a candidate for developing diabetes.

5. (withdrawn) A method for identifying an agent that interacts with SORCS 1 protein, the method comprising the steps of:  
exposing a SORCS 1 protein to a test agent; and  
determining whether the test agent binds to the SORCS 1 protein.

6. (withdrawn) The method of claim 5, wherein the SORCS 1 protein is from a human, a mouse or a rat.

7. (withdrawn) A method for preventing or treating type 2 diabetes in a human being, the method comprising the step of administering neurotensin to the human being in an amount sufficient to prevent or treat type 2 diabetes.

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8. (withdrawn) A method for identifying a therapeutic agent, or analog thereof, which is useful for the treatment of type 2 diabetes and related diseases, the method comprising the steps of:

exposing a SORCS 1 protein to a test agent; and  
determining whether the test agent modulates the biological activity of SORCS 1 protein.

9.-11. Canceled

12. (New) A method for determining whether a human is a candidate for developing type 2 diabetes, the method comprising the steps of:

determining the cDNA sequence of the human SorCS1 gene in the genome of the human; and  
comparing the determined SorCS1 cDNA sequence with SEQ ID NO:3, wherein a difference in the determined cDNA sequence relative to SEQ ID NO:3 indicates that the human is a candidate for developing type 2 diabetes, wherein the difference is a cytosine to a thymine substitution at nucleotide position 172 of the SorCS1 cDNA sequence.